

**REMARKS**

**I. Status of the claims**

Claims 1-27 are pending in this application. Claims 1-15 stand rejected and claims 16-27 remain withdrawn from further consideration by the Examiner. No claims have been added or amended by this Reply.

**II. Rejection under 35 U.S.C. § 112, first paragraph**

The Office has rejected claims 1-15 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention, i.e., lack of written description support for the claimed subject matter in the specification. Specifically, the Office alleges that the "limitations 'wherein said mixture of ingredients does not include carbodiimide catalyst[s] containing phospholene oxide and heterocyclic nitrogen containing polyols containing at least two beta-hydroxy terminated carbamate groups' are nowhere supported in the Applicant's specification." Final Office Action at page 2, paragraph 3. Applicant respectfully disagrees and traverses this rejection for at least the following reasons.

As the Office is aware, in rejecting a claim under the first paragraph of 35 U.S.C. § 112 for lack of adequate descriptive support, it is incumbent upon the examiner to establish that the originally-filed disclosure would not have reasonably conveyed to one having ordinary skill in the art that an appellant had possession of the now claimed subject matter. *Ex parte Parks*, 30 U.S.P.Q.2d 1234, 1236 (Bd. Pat. App. & Int. 1993), citing *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 U.S.P.Q.2d 1767

(Fed. Cir. 1993). Adequate description under the first paragraph of 35 U.S.C. § 112 does not require literal support for the claimed invention. *Id.*, citing *In re Herschler*, 591 F.2d 693, 200 U.S.P.Q. 711 (C.C.P.A. 1979). Rather, it is sufficient if the originally-filed disclosure would have conveyed to one having ordinary skill in the art that the inventor had possession of the concept of what is claimed. *Id.*, citing *In re Anderson*, 471 F.2d 1237, 176 U.S.P.Q. 331 (C.C.P.A. 1973).

In *Ex parte Parks*, the Examiner contended that the rejected claims lacked adequate descriptive support because there was "no literal basis for the" negative claim limitation directed to a decomposition process "in the absence of a catalyst." *Id.* The Board reasoned, however, that "the observation of a lack of literal support does not, in and of itself, establish a prima facie case for lack of adequate descriptive support under the first paragraph of 35 U.S.C. 112." *Id.* Moreover, the Board reversed the Examiner and held that the negative limitations are fully supported, noting that:

it cannot be said that the originally-filed disclosure would not have conveyed to one having ordinary skill in the art that appellants had possession of the concept of conducting the decomposition step generating nitric acid in the absence of a catalyst . . . Pyrolysis temperatures of between 600 degrees C and 700 degrees C, and above 700 degrees C were employed to achieve conversion of chemically bound nitrogen to nitric oxide. Smooth conversion was obtained above 700 degrees C, while the optimum conversion was found to occur above 900 degrees C. Throughout the discussion which would seem to cry out for a catalyst if one were used, no mention is made of a catalyst.

*Id.* (emphasis added).

The facts in *Ex parte Parks* are similar and relevant to the present case for the at the following reason. Contrary to the Office's allegations, the instant claim limitations are fully supported by the instant specification. In particular, support for the limitations

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can be found in the instant specification at page 14, line 17 - page 15, line 22, which refers to the preferred catalysts of the claimed invention. Further, at page 15, lines 9-22, of the instant specification, the preferred list of tertiary amine trimerization catalysts *excludes* carbodiimide catalysts containing phospholene oxide. In addition, at page 6, line 5-page 7, line 25 of the instant specification, the polyols listed as suitable for the claimed invention do not specifically include polyols containing at least two beta-hydroxy terminated carbamate groups. See *also* Examples 1-3, at pages 24-30 of the instant specification, where as with the rest of the disclosure, the excluded catalysts and polyols are never used.

Thus, consistently throughout the disclosure, including the several relevant examples, the excluded catalysts and polyols are never used. Accordingly, as in *Ex Parte Parks*, "it cannot be said that the originally filed disclosure would not have conveyed to one having ordinary skill in the art that [the inventors] had possession of the concept" of the claimed foam in the absence of the excluded catalysts and polyols. *Ex parte Parks*, 30 U.S.P.Q.2d at 1237. For at least this reason, Applicant respectfully submits that the rejection is in error and should be withdrawn.

Moreover, even if the instant specification does not expressly exclude specific types of catalysts or polyols, the Federal Circuit has held that Applicants may exclude certain components in the claims that are taught by the prior art. *In re Johnson*, 194 U.S.P.Q. 187, 196 (C.C.P.A. 1977). In the present case, the examples in the instant specification fully support the limited genus of the amended claims. See Examples 1-3, at pages 24-30 of the instant specification, which demonstrate the claimed invention.

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Furthermore, Applicant respectfully points out that the Office has the initial burden of presenting evidence or reasoning to explain why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims, particularly when the claims have been amended. M.P.E.P. § 2163.04. In the present case, the Office has not offered any such explanation, only a conclusory statement, which is incorrect as a matter of current U.S. patent practice.

Thus, for each of these reasons, the rejection under 35 U.S.C. § 112, first paragraph is improper and should be withdrawn.

**III. Rejection under 35 U.S.C. § 102(b)/103(a)**

The Office has rejected claims 1-4 and 11 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,185,383 to Regenauer ("Regenauer"). In summary, the Office alleges that Regenauer discloses a composition for making a rigid, closed cell polyurethane, without the use of fluorinated hydrocarbons, comprising one polyol, one isocyanate compound, a surfactant, water, a tertiary amine, and a heat insulating building element comprising one supporting substrate coupled to a rigid polyurethane foam. See Final Office Action at page 3, paragraph 6. Further, the Office alleges that the properties recited in the claims would be inherently present. *Id.* Applicant respectfully disagrees and traverses this rejection for at least the following reasons.

In order to support a rejection under section 102, the Office must show that the reference teaches the identical invention in as complete detail as is contained in the claims at issue. M.P.E.P. § 2131. Further, in order to establish a prima facie case of obviousness under section 103, the Office must show, among other things, that the

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reference teaches or suggests all of the limitations of the claimed invention. M.P.E.P. § 2143. In the present case, Regenauer does not identically teach, or even remotely suggest, all of the limitations of the present claims.

Rather, Regenauer broadly discloses, as admitted by the Office, a composition for making a rigid, closed cell polyurethane that comprises various components, such as a polyol, an isocyanate, a surfactant, water, and a tertiary amine. See, e.g., col. 2, lines 39-60. The reference, however, does not explicitly or implicitly recite that the catalysts and polyols that are excluded by the claimed invention are necessarily excluded from its polyurethane. For instance, Regenauer, in the Summary of the Invention, discloses that its invention is broadly inclusive of aromatic amino polyols (i.e., heterocyclic nitrogen containing polyols), with no disclosure or basis for excluding any certain type. See col. 2, line 55 and col. 3, lines 14-16. In fact, Regenauer expressly states that their invention may include an aromatic amino polyol. See col. 2, line 35. Since the genus of aromatic amino polyols would include heterocyclic nitrogen containing polyols excluded from claim 1, it is clear that Regenauer does not teach or suggest the exclusion of heterocyclic nitrogen containing polyols, as presently claimed. Thus, for at least this reason, the rejection is improper and should be withdrawn.

Furthermore, it is incorrect for the Office to assert that the claimed adhesion strength would necessarily be inherent in a composition according to Regenauer. According to the Federal Circuit, inherency may not be established by probabilities or possibilities. *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1268-69, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991). Rather, the case law sets forth that in order to support an anticipation rejection based on inherency, the Office must provide factual

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and technical grounds establishing that the inherent feature necessarily flows from the teachings of the prior art. See *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int. 1990). As this requirement is not satisfied in the present case, Regenauer does not anticipate the claimed invention.

Specifically, to support its allegation of inherency, the burden is on the Office to demonstrate that the invention disclosed in Regenauer necessarily has the properties (here, the recited adhesion strength) of the claimed invention. The Office has provided no such evidence in the present case. To the contrary, all the Office has done is to broadly conclude that such properties must be inherent, which hardly satisfies the Office's burden under *Ex parte Levy, supra*. At best, Regenauer, without reference to any value, broadly discloses that aromatic amino polyols, among other things, contribute to good foam adhesion. See col. 6, lines 53-56.

In addition to not meeting the requisite burden, the Office's conclusions are factually and technically unsound. In particular, the Office contends that "the composition of Regenauer meets all the components required by the claims" and that the claimed properties would, therefore, be inherently present. Final Office, page 3, paragraph 6. The premise, however, that Regenauer meets all the claim limitations is incorrect. As noted above, Regenauer does not teach or suggest the exclusion of the carboiimide catalysts or the heterocyclic nitrogen containing polyols, as claimed. In fact, as discussed above, Regenauer expressly includes aromatic amino polyols, a genus that includes heterocyclic nitrogen containing polyols. Accordingly, since the composition of Regenauer does not meet all the claimed limitations, it is incorrect for the Office to assert that the claimed properties would be inherent.

Moreover, Applicant respectfully points out, however, that it is known in the art that water-blown polyurethane foams, even after the claimed priority date, show poor adhesion (especially to metal), poor friability, and surface brittleness. See paragraphs 0004-0012 of published U.S. Patent Application No. 2002/0019452 A1, a copy of which is enclosed for the Office's convenience. These phenomena are even more acute at high NCO (isocyanate) indices, such as those of about 150, as in the case of the present invention, in which the NCO index is comprised between 110 and 150. See page 8, lines 23-26 of the instant specification. The present invention, however, overcomes the problems mentioned above, e.g., poor adhesion, with its novel combination of components, which exclude the previously discussed polyols and catalysts.<sup>1</sup> The well known problems of adhesion strength and other foam properties make the Office's unsupported assumptions regarding the inherent properties of Regenauer particularly unsound. Thus, as the Office's position is without technical merit, the rejection is improper and should be withdrawn for at least this additional reason.

Accordingly, Applicant respectfully requests the withdrawal of the rejection over Regenauer under 35 U.S.C. § 102(b)/103(a).

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<sup>1</sup> Applicants note that the polyamines of the claimed invention contribute to the adhesion properties of claimed polyurethane foam, i.e., improved over the prior art, utilizing conventional polyurethane formulations as well as water as a foaming agent. See, e.g., instant specification at page 11, lines 10-15; Examples 1-3, 11; and Tables V & VI.

**IV. Rejection under 35 U.S.C. § 103(a)**

The Office has rejected, under 35 U.S.C. § 103(a), claims 5, 7, 9, and 10 as obvious over Regenauer; claim 8 as obvious over Regenauer further in view of U.S. Patent No. 4,071,482 to Hopkins, Jr. et al. ("Hopkins"); and claims 12-15 as obvious over Regenauer further in view of EP 0716 107 (EP '107). Applicant respectfully disagrees and traverses these rejections for at least the following reasons.

As discussed above, to establish a prima facie case of obviousness the Office must demonstrate that the references teach or suggest all the limitations of the claimed invention. M.P.E.P. § 2143. In addition, with regard to a combination of references, the Office must show some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine their teachings. *Id.* Further, there must be a reasonable expectation of success in achieving the claimed invention. *Id.* In the present case, however, the Office has not satisfied any of these requirements.

First, as discussed above, Regenauer does not teach or suggest all the limitations of instant claim 1. Necessarily, therefore, Regenauer also does not teach or suggest all the limitations of instant claims 5-10 and 5-12, which ultimately depend from claim instant claim 1. As none of the secondary references have been cited to overcome these deficiencies, the combinations of Regenauer with EP '107 or Hopkins likewise fail to support a prima facie case of obviousness against any of instant claims 5-10 and 12-15.

Second, the Office has not cited, and the record does not contain, any evidence of the required motivation to modify Regenauer in view of the secondary references. In



fact, as discussed further below, the references actually teach away from the Office's proposed combination.

With regard to Hopkins, the reference discloses the specific use of inert blowing agents, such as fluorinated hydrocarbons, in the forming the disclosed polyurethane foams. See col. 4, lines 3-12. By contrast, Regenauer teaches against the use of fluorinated hydrocarbons, which are disclosed as harmful to the environment. See col. 1, line 53-58. Thus, Regenauer and Hopkins are inherently incompatible, as one skilled in the art would not have been motivated to select components from Hopkins for use in Regenauer, as proposed by the Office. Further, the claimed invention also teaches against the use of such fluorinated hydrocarbons. Accordingly, to the extent there would have been motivation to combine Regenauer and Hopkins, the resultant product would be distinct from the presently claimed invention.

Moreover, not only would there be no suggestion or motivation to combine both of the references, there also would not be any reasonable expectation in achieving the claimed invention, which explicitly teaches away from the disclosure of Hopkins. This is especially true in view of their incompatible requirements regarding halogenated hydrocarbons. Additionally, the rejection is deficient as a matter of law, since the Office has not cited any evidence of the required reasonable expectations of success.

With regard to EP '107, as discussed in the Amendment filed January 22, 2003, the reference discloses a heat insulation panel comprising a foam of modified polyisocyanurate, which is provided by a reaction that uses, among other things, a catalyst of phospholene oxide promoting carbodiimide linkages. See Amendment filed January 22, 2003, at page 6. Moreover, the Office has not cited any evidence of an

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motivation or reasonable expectation of success to modify or combine Regenauer in view of EP '107. Accordingly, the rejection is deficient as a matter of law. Further, to the extent that there would have been a motivation to combine Regenauer in view of EP '107, the resultant combination would be distinct from the presently claimed invention.

Thus, the rejections under 35 U.S.C. § 103(a) are improper and should be withdrawn for at least these reasons.

**V. Conclusion**

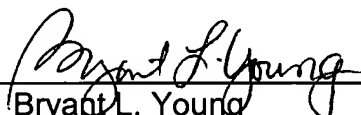
In view of the foregoing remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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**Enclosure:**

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